

**WEST**☐ Generate Collection

L14: Entry 10 of 29

File: USPT

Feb 20, 1996

DOCUMENT-IDENTIFIER: US 5492702 A

TITLE: Substrate-limited yeast-leavened refrigerated dough products

## DEPR:

The non-native carbohydrate which can be fermented by the yeast strain in the present dough can be virtually any carbohydrate which does not naturally occur in the flour. This carbohydrate is preferably a sugar or an oligosaccharide, though. For instance, the fermentable, non-native sugar may be galactose or lactose, a disaccharide of glucose and galactose.

## DEPR:

In order to test the responsiveness of the GAL+ yeast used in Example 2, four different dough compositions, with varying non-native carbohydrates, were prepared. Each of the four doughs included 290.25 g of flour, 176.60 g of water, 3.50 g of salt and 12.00 g of the D308.3 GAL+ yeast used in Example 1. The formulas of the four different doughs varied in the nature of the other ingredients which were added. In a control sample, no other ingredients were added; in a second sample, 5.00 g of galactose was included; in a third sample, 10.00 g of lactose was provided; and the final sample included 20.00 g of non-fat dry milk (NFDM), which is used as a flavoring ingredient in some doughs and typically contains some lactose and may contain slight amounts of galactose.

## DEPR:

As can be seen from FIGS. 5 and 6, only the dough composition which included galactose generated appreciable volumes of carbon dioxide. The control sample, the lactose-containing sample and the sample with the NFDM all generated less than about 10 ml of carbon dioxide over a period of about 20 hours. Furthermore, essentially all of the carbon dioxide generation measured for the non-galactose doughs was generated in the first one to two hours of incubation. This slight change in gas volume in the Risograph sample jars may be wholly attributable due to thermal expansion of the headspace in the sample jars, as explained above. Accordingly, the samples which did not contain non-native galactose quite likely did not generate any significant amount of carbon dioxide during the course of this test.

## DEPR:

The results of this experiment show that the D308.3 yeast can metabolize galactose but it is substantially incapable of fermenting any carbohydrates which are native to flour of the dough composition. It also appears that this yeast is substantially incapable of fermenting either "straight" lactose or lactose in non-fat dry milk. During the course of this experiment, the galactose-containing dough appears to continue to generate carbon dioxide, indicating that not all of the galactose was used. Furthermore, at the end of the 20-hour incubation, the galactose dough had generated slightly more than 100 ml of carbon dioxide, with carbon dioxide generation appearing to continue beyond the end of the experiment.

**WEST**

Generate Collection

L14: Entry 4 of 29

File: USPT

Jul 22, 1997

DOCUMENT-IDENTIFIER: US 5650183 A

TITLE: Preparation of refrigeratable dough products containing *saccharomyces cerevisiae* ATCC 74212

## DEPR:

The non-native carbohydrate which can be fermented by the yeast strain in the present dough can be virtually any carbohydrate which does not naturally occur in the flour. This carbohydrate is preferably a sugar or an oligosaccharide, though. For instance, the fermentable, non-native sugar may be galactose or lactose, a disaccharide of glucose and galactose.

## DEPR:

In order to test the responsiveness of the GAL+ yeast used in Example 2, four different dough compositions, with varying non-native carbohydrates, were prepared. Each of the four doughs included 290.25 g of flour, 176.60 g of water, 3.50 g of salt and 12.00 g of the D308.3 GAL+ yeast used in Example 1. The formulas of the four different doughs varied in the nature of the other ingredients which were added. In a control sample, no other ingredients were added; in a second sample, 5.00 g of galactose was included; in a third sample, 10.00 g of lactose was provided; and the final sample included 20.00 g of non-fat dry milk (NFDM), which is used a flavoring ingredient in some doughs and typically contains some lactose and may contain slight amounts of galactose.

## DEPR:

As can be seen from FIGS. 5 and 6, only the dough composition which included galactose generated appreciable volumes of carbon dioxide. The control sample, the lactose-containing sample and the sample with the NFDM all generated less than about 10 ml of carbon dioxide over a period of about 20 hours. Furthermore, essentially all of the carbon dioxide generation measured for the non-galactose doughs was generated in the first one to two hours of incubation. This slight change in gas volume in the Risograph sample jars may be wholly attributable due to thermal expansion of the headspace in the sample jars, as explained above. Accordingly, the samples which did not contain non-native galactose quite likely did not generate any significant amount of carbon dioxide during the course of this test.

## DEPR:

The results of this experiment show that the D308.3 yeast can metabolize galactose but it is substantially incapable of fermenting any carbohydrates which are native to flour of the dough composition. It also appears that this yeast is substantially incapable of fermenting either "straight" lactose or lactose in non-fat dry milk. During the course of this experiment, the galactose-containing dough appears to continue to generate carbon dioxide, indicating that not all of the galactose was used. Furthermore, at the end of the 20-hour incubation, the galactose dough had generated slightly more than 100 ml of carbon dioxide, with carbon dioxide generation appearing to continue beyond the end of the experiment.

**WEST**☐ Generate Collection

L14: Entry 17 of 29

File: USPT

May 9, 1989

DOCUMENT-IDENTIFIER: US 4828853 A

TITLE: Leavener-containing dough compositions bakeable to a moist matrix

## BSPR:

Sugar humectants are preferred because they may also impart a desired degree of sweetness to the baked product, when such sugars are employed alone or in combination with a non-humectant sugar (such as sucrose). Suitable humectant sugars include fructose, dextrose, corn syrups, invert syrups, high fructose corn syrups, honey, molasses, as well as mixtures of one or more of the foregoing humectants with sucrose. For example, a suitable humectant sugar composition for use in the leavener-containing doughs of this invention may be comprised of about 0 to 85% sucrose, with the balance of the sugar being comprised of fructose, and/or dextrose employed in the form of the crystalline sugar, or in the alternative the balance of the sugar may be provided by the sugar solids content of a corn syrup, honey, or a high fructose corn syrup, or another humectant sugar. Commercially available high fructose corn syrups are prepared by the enzymatic isomerization of dextrose containing corn syrups, and typically possess a sugar solids component of about 40% to about 100% by weight fructose, with the balance of the non-fructose sugar solids being primarily dextrose plus minor amounts of other monosaccharides. The sugar solids content of commercially available high fructose corn syrups typically ranges from about 70% to 73%, up to about 82% by weight. Examples of other humectant sugars include maltose, sorbose, mannose, lactose, galactose, etc. It is preferred that when sucrose is employed in the dough that the humectant sugar comprise at least about 15%, and most preferably at least about 20% by weight of the total sugar content of the dough.

**WEST****End of Result Set**

Generate Collection

L3: Entry 1 of 1

File: USPT

Apr 11, 1989

DOCUMENT-IDENTIFIER: US 4820520 A

TITLE: Antiseptic agent for food and drink and method of antiseptic treatment thereof

## BSPR:

It is known that pectin is widely present in fruits such as apples, grapes and citrus fruits and vegetables, and pectin has been used for a long time as the material for making jam or jelly utilizing its property of easily forming a gel. Pectin is a polymeric substance comprising galacturonic acid and several neutral saccharides such as arabinose, galactose, rhamnose and xylose. In pectin, the composition differs to some extent according to the kind of the starting material. For example, the ratio of galacturonic acid in grape pectin is higher than that in lemon pectin, while the arabinose content in the latter is higher than that in the former. However, it has not been completely elucidated how these components are bonded and arranged to construct pectin. Commercially available pectins are roughly divided in high methoxyl pectin and low methoxyl pectin according to the methoxyl group content. In the present invention, all of the known pectins can be used. In short, the term "pectin" used in the present invention includes pectins of all the origins.

## DEPR:

Noodles were prepared from a kneaded mixture of 1 kg of wheat flour with 360 g of water and 15 g of sodium chloride according to customary procedures and the noodles were boiled for 20 minutes to obtain fresh noodles. In this process, a sample described below was added to the noodle dough and the storage test was carried out at a temperature of 35.degree. C. and a relative humidity of 85%. The product obtained in Example 5 or 6 was used as the pectin decomposition product.

## DEPR:

The pectin decomposition product obtained in Example 5 was added to the noodle dough in an amount of 0.7% (present invention).

## DEPR:

The pectin decomposition product obtained in Example 5 was added to the noodle dough in an amount of 0.5% and, after the kneaded dough was molded and boiled, the boiled noodles were immersed for 10 seconds in an aqueous solution containing 2% of the pectin decomposition product obtained in Example 5 (present invention).

**WEST**

Generate Collection

L5: Entry 9 of 11

File: USPT

Jun 12, 1973

DOCUMENT-IDENTIFIER: US 3738617 A  
TITLE: DOUGH CONDITIONING APPARATUS

## BSPR:

In conventional dough forming operations, an alimentary paste or dough mixture is formed in a mixing chamber by homogeneously admixing the necessary ingredients, such as water, salt, flour and yeast in the quantities desired by the user. The dough mixture is then deposited in a hopper which gravity feeds the mixture to a degassing apparatus for dispelling some of the gases present in the dough mixture. The finished product is then discharged from the degassing apparatus and divided into discrete bodies to form rolls, buns, and the like and ultimately fed into the baking ovens.

**WEST**

Generate Collection

L5: Entry 6 of 11

File: USPT

Nov 5, 1991

DOCUMENT-IDENTIFIER: US 5063072 A

TITLE: One-step flavored pasta products and processes for preparing fast cooking pasta products

## DEPR:

Pasta is prepared from an "alimentary paste" or dough by which is meant a glutinous flour and water mixture. Alimentary pastes or doughs are generally made from coarse, hard flours obtained from hard wheat such as the middlings of durum wheat, often referred to as "semolina flour" or "semolina". In addition, fine flours such as durum flour, wherein 98 weight percent passes through a 70 mesh sieve, are also suitable and are intended to fall within the scope of the term "glutinous flour". The only requirement for the flour is that it provide a self-supporting paste upon mixture with an appropriate amount of water. Semolina typically comprises a major portion of the flour in alimentary pastes because it is highly glutinous, i.e., has a high content of the protein gluten which is capable of denaturing to provide a self-supporting pasta. The denaturation of gluten will be discussed in further detail, infra.